which have a synchronization phase difference from those handled by diversity handover trunk 34, and thus the reference clock of BS 4 is by one clock unit (OFS) behind the corresponding reference clock of BS 2. It is further assumed that the maximal fluctuation delay frames may undergo during the passage from diversity handover trunk 34 to BS is 38 msec (being equal to 3 radio frame clocks (FN) + 13 clock units (OFS)), being the same for BS 2 and BS 4.--

In the claims:

Please cancel claims 1-4, 9, 10, 18-24, 27-36 and 39.

Please amend claims 5-8, 11-17, 25, 26, 37 and 38 to read as set forth.

5. (Amended) A frame transmitting device comprising:

a frame number adder for adding a frame number to a frame; and

a transmitter for transmitting the frame with the frame number;

wherein the frame number is determined according to an expected delay time of the frame.

6. (Amended) A frame receiving device comprising:

a receiver for receiving a frame having a frame number; and

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number;

wherein the frame synchronizer executes the synchronization adjustment according to an expected delay time required for the frame to reach the frame synchronizer.

7. (Amended) A frame transmitting device comprising:

a frame number adder for adding a frame number to a frame;

a transmitter for transmitting the frame with the frame number;

wherein the frame number is determined according to an expected delay time of the frame; and

wherein the expected delay time is equal to the sum of a maximum delay time estimated for the frame, and an estimated maximum phase difference between first and second clock pulses.

8. (Amended) A frame receiving device comprising:

a receiver for receiving a frame having a frame number;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number;

wherein the frame synchronizer executes the synchronization adjustment according to an expected delay time required for the frame to reach the frame synchronizer; and

wherein the expected delay time is equal to the sum of a maximum delay time estimated for the frame, and an estimated maximum phase difference between first and second clock pulses.

11. (Amended) A frame transmitting device comprising:

a frame number adder for adding a frame number to a frame;

a transmitter for transmitting the frame with the frame number;

wherein the frame number is determined according to an expected delay time of the frame; and

wherein, when a real delay time exceeds the expected delay time, the expected delay time is updated.

12. (Amended) A frame receiving device comprising:

a receiver for receiving a frame having a frame number;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number;

wherein the frame synchronizer executes the synchronization adjustment according to an expected delay time required for the frame to reach the frame synchronizer; and

wherein, when a real delay time exceeds the expected delay time, the expected delay time is updated.

13. (Amended) A. frame communication system comprising:

a frame number adder for adding a frame number to a frame;

a transmitter for transmitting the frame including the frame number;

a receiver for receiving the frame from the transmitter;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number included in the frame;

a receiver side clock circuit which provides first clock pulses;

a transmitter side clock circuit which provides second clock pulses in synchronization with the same phase or a different phase with respect to the first clock pulses provided by the receiver side clock circuit;

wherein the frame number adder adds the frame number to the frames according to the first clock pulses, and the frame synchronizer executes the synchronization adjustment according to the second clock pulses;

a transmission control circuit which determines the frame number according to a correction value; and

a reception control circuit which provides an alarm signal to the transmission control circuit when the reception control circuit finds that the frame synchronizer is unable to achieve the synchronization adjustment,

wherein, when the transmission control circuit receives the alarm signal, the transmission control circuit updates the correction value.

14. (Amended) A frame communication system comprising:

a frame number adder for adding a frame number to a frame;

a transmitter for transmitting the frame including the frame number;

a receiver for receiving the frame from the transmitter;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number included in the frame;

a receiver side clock circuit which provides first clock pulses;

a transmitter side clock circuit which provides second clock pulses in synchronization with the same phase or a different phase with respect to the first clock pulses provided by the receiver side clock circuit;

wherein the frame number adder adds the frame number to the frames according to the first clock pulses, and the frame synchronizer executes the synchronization adjustment according to the second clock pulses;

a transmission control circuit which determines the frame number according to a correction value;

a reception control circuit which provides an alarm signal to the transmission control circuit when the reception control circuit finds that the frame synchronizer is unable to achieve the synchronization adjustment,

wherein, when the transmission control circuit receives the alarm signal, the transmission control circuit updates the correction value;

at least one other frame number adder; and

a selection circuit which selects one frame from the frames provided by the plurality of frame number adders, and provides the selected frame to the frame synchronizer.

15. (Amended) A. frame communication system comprising:

a frame number adder for adding a frame number to a frame;

a transmitter for transmitting the frame including the frame number;

a receiver for receiving the frame from the transmitter;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number included in the frame;

a receiver side clock circuit which provides first clock pulses;

a transmitter side clock circuit which provides second clock pulses in synchronization with the same phase or a different phase with respect to the first clock pulses provided by the receiver side clock circuit;

wherein the frame number adder adds the frame number to the frames according to the first clock pulses, and the frame synchronizer executes the synchronization adjustment according to the second clock pulses;

a transmission control circuit which determines the frame number according to a correction value;

a reception control circuit which provides an alarm signal to the transmission control circuit when the reception control circuit finds that the frame synchronizer is unable to achieve the synchronization adjustment,

wherein, when the transmission control circuit receives the alarm signal, the transmission control circuit updates the correction value;

at least one other frame number adder;

a selection circuit which selects one frame from the frames provided by the plurality of frame number adders, and provides the selected frame to the frame synchronizer;

a combining circuit;

wherein the frame synchronizer executes synchronization adjustment of the plurality of frames provided by the frame number adders, and the combining circuit combines the adjusted frames into one frame.

16. (Amended) A frame communication system comprising:

a frame number adder for adding a frame number to a frame;

a transmitter for transmitting the frame including the frame number;

a receiver for receiving the frame from the transmitter;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number included in the frame;

a receiver side clock circuit which provides first clock pulses;

a transmitter side clock circuit which provides second clock pulses in synchronization with the same phase or a different phase with respect to the first clock pulses provided by the receiver side clock circuit;

wherein the frame number adder adds the frame number to the frames according to the first clock pulses, and the frame synchronizer executes the synchronization adjustment according to the second clock pulses;

a transmission control circuit which determines the frame number according to a correction value;

a reception control circuit which provides an alarm signal to the transmission control circuit when the reception control circuit finds that the frame synchronizer is unable to achieve the synchronization adjustment,

wherein, when the transmission control circuit receives the alarm signal, the transmission control circuit updates the correction value;

at least one other frame number adder;

a selection circuit which selects one frame from the frames provided by the plurality of frame number adders, and provides the selected frame to the frame synchronizer; and

further characterized in that the selection circuit selects one frame based on any information included in the frames.

17. (Amended) A frame communication system comprising:

a frame number adder for adding a frame number to a frame;

a transmitter for transmitting the frame including the frame number;

a receiver for receiving the frame from the transmitter;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number included in the frame;

a copying means which copies a frame with the frame number, thereby creating a plurality of frames;

a plurality of physical or logical transmission routes which transmit the frames separately;

a plurality of radio transmitters which transmit the plurality of frames transmitted through the transmission routes, at timings determined by the frame number attached thereto; and

a plurality of terminals to receive in a diversity manner the frames transmitted from the radio transmitters.

25. (Amended) A frame receiving device comprising:

a receiver for receiving a frame accompanying with a frame number;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number;

wherein the frame synchronizer executes the synchronization adjustment according to an expected delay time required for the frame to reach the frame synchronizer; and

wherein the expected delay time is determined according to a difference in timing between the frame number attached to a frame received in the past, and an actual time of reception of the same frame.

26. (Amended) A frame receiving device comprising:

a receiver for receiving a frame accompanying with a frame number;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number;

wherein the frame synchronizer executes the synchronization adjustment according to an expected delay time required for the frame to reach the frame synchronizer;

wherein the expected delay time is determined according to a difference in timing between the frame number attached to a frame received in the past, and an actual time of reception of the same frame; and

wherein the expected delay time is determined by obtaining a difference in timing between the frame number attached to a frame received in the past, and an actual time of reception of the same frame, and by adding a predetermined safety factor to the difference.

37. (Amended) A frame transmitting device comprising:

a frame number adder for adding a frame number to a frame; and

a transmitter for transmitting the frame with the frame number;

wherein the frame number is determined according to an expected delay time of the frame;

wherein, when a real delay time exceeds the expected delay time, the expected delay time is updated; and

wherein a time length introduced for updating the expected delay time is constant regardless of an overtime of a real delay time exceeding the expected delay time.

38. (Amended) A frame receiving device comprising:

a receiver for receiving a frame accompanying with a frame number;

a frame synchronizer for executing a frame synchronization adjustment referring to the frame number;

wherein the frame synchronizer executes the synchronization adjustment according to an expected delay time required for the frame to reach the frame synchronizer;

wherein, when a real delay time exceeds the expected delay time, the expected delay time is updated; and

wherein a time length introduced for updating the expected delay time is constant regardless of an overtime of a real delay time exceeding the expected delay time.